Parallel Lines Cut By Transversals—Stations Answer Sheet

Name: Key

Period: 0

Directions: Clearly show all work and verify in the end with the key. Correct any mistakes in pen.
Be sure to Identify both the relationship and the value of x.

Station A	Station B
Type of Relationship: Alt Int. Angles $$9x+13=12x-29$$ $$42=3x$$ $$x=14$$ $x = $ 14	Type of Relationship: Same Side Interior $$(13x+5)+(8x-14)=180$$ $$21x-9=180$$ $$21x=189$$ $$x=9$$ $x = $ 9
Station C	Station D
Type of Relationship: Alt Ext Angles $$10x+17=12x+7$$ $$10=2x$$ $$x=5$$ $x = $ 5	Type of Relationship: Corresponding Angles $$5x+52=9x-16$$ $$68=4x$$ $$x=17$$ $x = $ 17
Station E	Station F
Type of Relationship: Same Side Interior $$(16x+5)+(9x-25)=180$$ $$25x-20=180$$ $$25x=200$$ $$x=8$$ $x = $ 8	Type of Relationship: Corresponding Angles $$10x-29=8x+1$$ $$2x=30$$ $$x=15$$ $x = $ 15
Station G	Station H
Type of Relationship: Alt Int Angles $$2x+43=6x-1$$ $$44=4x$$ $$x=11$$ $x = $ 11	Type of Relationship: Alt Ext Angles $$7x+39=11x+15$$ $$24=4x$$ $$x=6$$ $x = $ 6

Station I	Station J
Type of Relationship: __Alt Ext Angles__	Type of Relationship: __Same Side Interior__
$7x-4 = 9x-42$ $38 = 2x$ $x = 19$	$(9x-7)+(4x+31) = 180$ $13x+24 = 180$ $13x = 156$
$x = $ __19__	$x = $ __12__
Station K	Station L
Type of Relationship: __Alt Ext Angles__	Type of Relationship: __Alt. Ext. Angles__
$16x-30 = 9x+19$ $7x = 49$ $x = 7$	$9x-29 = 5x+11$ $4x = 40$ $x = 10$
$x = $ __7__	$x = $ __10__
Station M	Station N
Type of Relationship: __Alt. Int. Angles__	Type of Relationship: __Corresponding Angles__
$10x-42 = 8x-10$ $2x = 32$ $x = 16$	$99-x = 3x+7$ $92 = 4x$ $x = 23$
$x = $ __16__	$x = $ __23__
Station O	Station P
Type of Relationship: __Same side interior__	Type of Relationship: __Corresponding Angles__
$(36x+16)+(17x+5) = 180$ $53x+21 = 180$ $53x = 159$ $x = 3$	$14x+11 = 20x-13$ $24 = 6x$ $x = 4$
$x = $ __3__	$x = $ __4__

Same Side Interior Angles	Alternate Interior Angles	Corresponding Angles	Alternate Exterior Angles